



## **CITY OF KIRKLAND**

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### **MEMORANDUM**

**To:** Transportation Commission

**From:** David Godfrey, P.E. Transportation Engineering Manager

**Date:** February 1, 2008

**Subject:** Non-Motorized Plan; Bicycle network

This memo describes development of a bicycle network that would be part of the Non-motorized plan update. Mr. Owen Pauls, a Kirkland resident and avid cyclist has generously volunteered his time to help with this work. He is working on a document that discusses development of a bicycle network and improvements in more detail than is presented in this memo.

Overall Goals for developing a bicycle network plan:

1. Determine a bicycle facility network that will guide where investments are made in the medium term (0-10 years). All streets must have appropriate accommodation for cyclists. This is just a subset of the most critical routes. It is limited to collectors and arterials that have volumes over 3000 ADT
2. Find the areas on this network that need improvement.
3. Identify the nature of the improvements.
4. Prioritize those improvements

#### 1. Determine a network

A network can be built of the following A-E components. This network is shown in orange on Figure 1 below. Note that a very similar network emerges if major east-west and north-south routes are considered as the basis for building the network.

A. The survey suggests that cyclists are interested in regional destinations/relatively longer routes. Therefore, start with the endpoints of Kirkland roads and identify the places they lead to. Namely, (in no particular order):

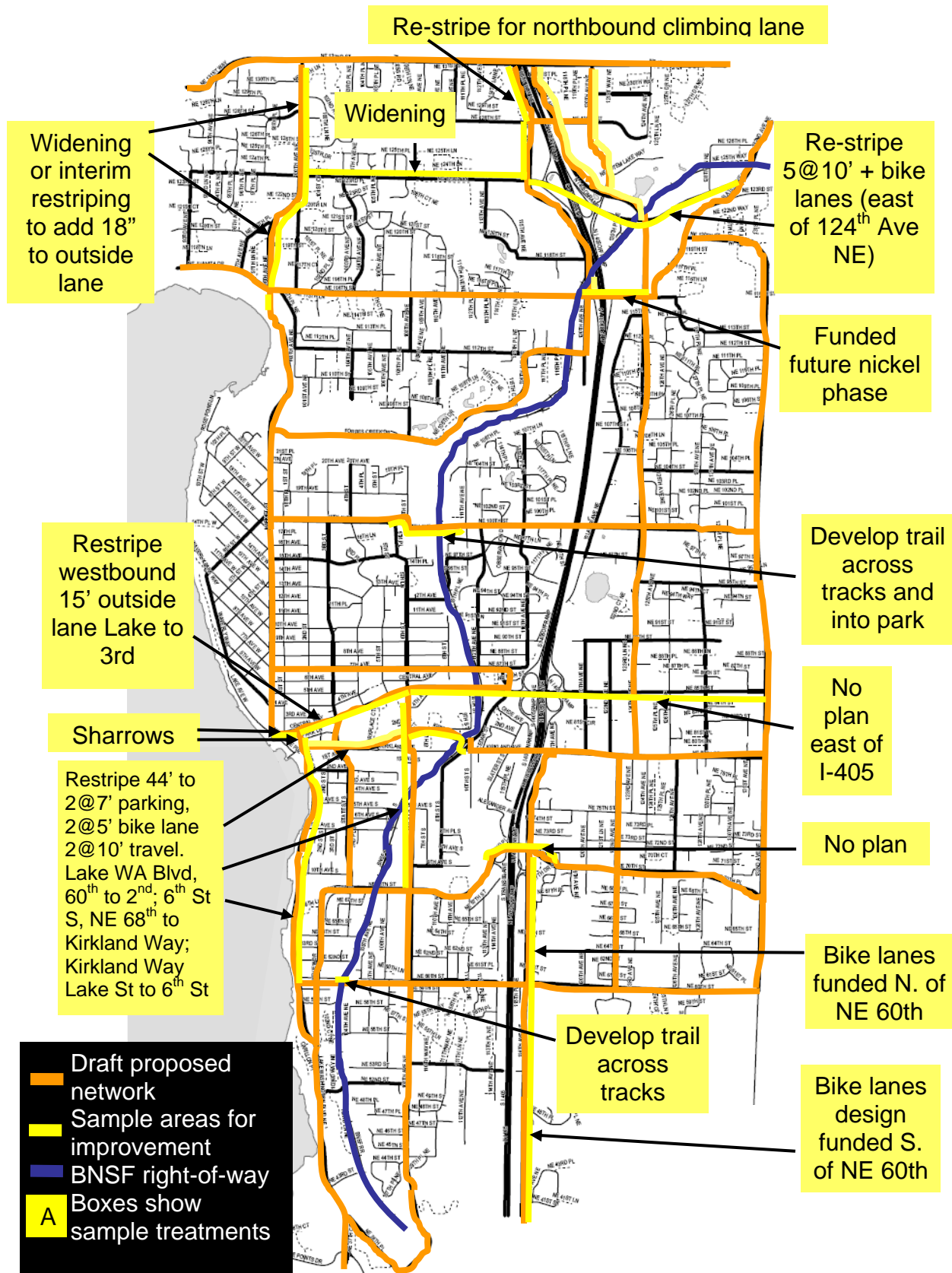


Figure 1 Draft bicycle network

<b>CONNECTION</b>	<b>DESTINATION</b>
Juanita Drive	Kenmore/B. G. Trail
124th Ave NE, BNSF row	Woodinville
Lake Washington Blvd	Bellevue
100th Ave NE	Bothell/Samm Rvr Trail
NE 132nd St, NE 124th St.	Sammamish River Trail
116th Ave. NE	Bellevue SR 520 Trail
108th Ave NE,	Bellevue
132nd Ave NE Sbnd	Overlake/Bellevue/520 Trail
132nd Ave NE Nbd	Woodinville
NE 100th Ave (via Willows Rd), NE 80th St. (via 140th Ave NE) NE 70th St.	Redmond
BNSF right of way	Woodinville/Bellevue

B. Routes that people are using or want to use as reflected in the survey:

- LW Blvd/Lake St/Central Way/Market Street/Juanita Drive from S. city limits to west city limits.
- 100th Ave NE between NE 124th and NE 132nd St.
- NE 68th St/NE 70th St between west of the BNSF and 132nd Ave. This suggests adding Lakeview Dr. between NE 68th St. and Lake Washington Blvd. along with State Street between NE 68th St. and Central Way. Adding these last two pieces connects 68th/70th to something on the west end.
- 116th Avenue NE between S. Kirkland City limit and NE 80th St. This suggests adding another connection all the way to Totem Lake via 124th Ave. NE/Totem Lake Blvd./120th Ave NE. Adding 122nd NE between NE 80th and NE 60th Streets completes that N/S corridor.
- 108th Avenue/6th Street between S. city limits and Central Way

C. The network of existing bicycle facilities should be built upon

- 132nd Ave NE/NE 120th St. between south City Limits and Slater Ave.
- NE 132nd Street between east city limits and west city limits
- NE 80th St./I-405 overpass/Kirkland Ave/Kirkland Way between 132nd Ave NE and Downtown
- NE 116th Street between 100th Ave NE and Slater Ave.
- NE 100th Street NE/18th Ave between 132nd Ave NE and Market St.

D. BNSF row and connections

- BNSF row
- NE 60th St between 132nd Ave NE and Lake Washington Blvd
- 7th Ave, 6th St., between BNSF and Central Way
- NE 112th St/Forbes Creek Dr. between BNSF and Market St.
- 120th Ave NE/116th Ave NE between NE 112th St. and NE 132nd St. this suggests including NE 128th St between 116th Ave NE and 120th Ave NE.

E. Major arterials that provide access

- NE 85th Street between 6th St. and 132nd Ave NE
- NE 124th Street between 100th Ave NE and 132nd Ave NE

## 2. Areas that need improvement

Given the network described above, what parts of what links need work or at least examination? An initial set is mapped in Figure 1 in yellow and described in the following list:

- BNSF row closer than ever but still unclear when a complete, fully functioning trail would be established
- 98th Ave NE /100th Ave NE between NE 116th and NE 132nd Sts. No bike facilities
- 116th Ave NE between NE 124th and NE 132nd Sts. Brand new but no bike facilities on street
- Connection across BNSF between 18th Ave and NE 100th St. currently a dirt trail. This will come into play after BNSF is developed
- Kirkland Way between Central Way and 6th St.
- NE 60th St. across BNSF Needed when the BNSF is completed
- 116th Ave NE between S. city limits and NE 70th St. Needs bike lanes to match Bellevue
- NE 70th St at I-405 interchange hard for bikes and cars to interact here
- Lake St. between NE 60th St. and Central Way
- 6th St. S. between NE 68th and Central Way
- Central Way between Market St. and 6th Street
- Various signalized intersections where lanes are dropped such as: 98th Ave./NE 116th St, State St/NE 68th, Central/3rd, Central/6th

## 3. Identify improvements

Text boxes in Figure 1 illustrate possible treatments for many of the areas identified in step 2. Several segments that have a 44' curb to curb cross-section. This lends itself to 2 10' travel lanes, 2 5' bike lanes and 2 7' parking lanes. Several others are funded. The longest segments that are the most difficult to treat include

- 98th Ave NE/100th Ave NE north of NE 116th Street,
- NE 124th St between 100th Avenue NE and 124th Avenue NE
- NE 85th Street east of 6th Street.

These are high volume higher speed routes that don't lend themselves to low-cost improvements like restriping.

## 4. Prioritization

A proposed prioritization scheme would score each project using high, medium and low scores for the following factors

- Regional Value: It this improvement on a route that makes a regional connection?
- Missing Segment: Does this improvement allow adjacent complete segments to connect?
- Survey ranking: Did this improvement get much comment in the survey?
- Safety Impact: Does this improvement address a safety concern?
- Cost: What is the relative cost of the improvement?
- Feasibility: How feasible is this project's scope?

## Public Comment

If the Commission feels comfortable with the four components described above, we will plan to take them to the public in March.

Questions for the Commission to consider

1. What changes would you like to make to the network illustrated in Figure 1? In particular do you support the idea of limiting separate to streets with volumes greater than 3000 ADT and focusing on collectors and arterials?
2. Should NE 85th Street east of I-405 be on the network?
3. Are there other "problem areas" that should be addressed?
4. Do you support the proposed cross section for 44' streets?
5. Are the factors used for initially prioritizing the improvements the right ones? Should some have more weight than others?
6. What is the most productive way to involve the public?